

## **Remarks/Arguments**

Claims 1-17 are pending in the application. Claims 1-17 are rejected. Claims 1-4 and 8 are amended. New claims 18-19 are added.

Claims 2-4 have been amended for clarity. Claim 1 has been amended to add the limitation "wherein an absorber tube is freely supported by a rotatable support member which rotates about an axis that is orthogonal to the absorber tubes." Claim 8 has been amended to recite "wherein the absorber tubes are freely supported by a series of rotatable support members which rotate about an axis that is orthogonal to the absorber tubes." Support for the amended and new claims may be found throughout the specification and claims as originally filed, for example, *inter alia*, page 6 lines 14-17, page 8 lines 10-17, and Figures 5 and 6. No new matter is believed to be added.

Applicant notes that the claim set, as amended, includes one independent claim (i.e., claim 1), has 19 claims total, and as such no fees are due.

Applicant further notes that this Amendment and Response is being filed within a three-month extension of the three month shortened statutory period. This serves as a request for any such required extension, pursuant 37 CFR 1.136. Any fees due may be charged as set forth below.

With respect to all amendments, Applicants have not dedicated or abandoned any unclaimed subject matter and, moreover, have not acquiesced to any rejections and/or objections made by the Office. Applicants expressly reserve the right to pursue prosecution of any presently excluded claim embodiments in future continuations, continuation-in-part, and/or divisional applications.

In view of the claims as set forth above and the remarks below, Applicant respectfully submits that all claims patentably distinguish over the cited references and are in condition for allowance.

***Claim Rejections - 35 USC § 112, second paragraph***

Claims 3 and 4 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have amended claims 3 and 4, replacing "of the order of" with "about".

Applicants submit that amended claims 3 and 4 are definite.

Claims 2 and 3 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly having insufficient antecedent basis for the limitation "ratio" in diameter of each absorber tube to the dimension of the trough aperture.

Applicants have amended claims 2 and 3 to read "wherein the diameter of each absorber tube to the dimension of the trough aperture has a ratio..."

Accordingly, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 112, second paragraph.

***Claim Rejections - 35 USC § 103(a)***

Claims 1-17 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over US Patent No. 4,505,260 of Metzger in views of US Patent No. 5,860,414 of Steinmann and US Patent No. 4,416,264 of Herrick, et al.

Metzger relates to a device wherein concentrated radiant energy is directed through a liquid lens to a target for absorption of the radiation. Steinmann relates to a collector for radiation, comprising a trough-shaped mirror extending in longitudinal direction and reflecting the radiation into a focus region, and an absorber line extending in longitudinal direction through the focus region of the trough-shaped mirror. Herrick relates to a solar heat collector in which a

filamentary heat absorber is disposed within a housing having opaque, heat-insulated sides and bottom and a plurality of partially evacuated tubular members substantially transparent to incident solar radiation mounted on the top thereof. Alone or in combination, the cited documents do not teach or suggest the claimed invention.

Neither Metzger, Steinmann, nor Herrick, alone or in combination, disclose or suggest a collector structure comprising an inverted trough and, located within the trough, a plurality of longitudinally extending absorber tubes, wherein an absorber tube is freely supported by a rotatable support member which rotates about an axis that is orthogonal to the absorber tubes, as claimed in claim 1, or wherein the absorber tubes are freely supported by a series of rotatable support members which rotate about an axis that is orthogonal to the absorber tubes, as claimed in claim 8. Applicants wish to bring the Examiner's attention to Figures 5 and 6 and page 8 lines 10-17 of the present application, in which rotatable support tube 31, which extends orthogonally between the side walls 32 of the channel portion 17 of the inverted trough and is carried for rotational movement by spigots 33, freely supports absorber tubes 30. This arrangement advantageously accommodates expansion of the absorber tubes 30 and the relative expansion of the individual tubes, which may expand as the heat exchange fluid is heated by the solar radiation. Applicants respectfully submit that Steinmann does not teach a rotatable support member for *freely supporting the absorber tubes and which rotates about an axis orthogonal to the absorber tubes*, such that expansion of the absorber tubes is accommodated. Further, neither Metzger, Steinmann, nor Herrick, alone or in combination, disclose or suggest a ratio of the diameter of each absorber tube to the dimension of the trough aperture is about 0.03:1.00, as claimed in claim 3.

The Action further rejects claims 2-17 as being obvious over Metzger in view of Steinman and Herrick, et al. These claims all depend, either directly or indirectly, on independent claim 1 and, as explained above, neither Metzger, Steinmann, nor Herrick, alone or

in combination, teach the elements claimed in claim 1. Therefore, a prima facie case of obviousness has not been established.

Accordingly, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 103(a), second paragraph.

Nothing herein should be deemed as a disclaimer or surrender of any rights, an acquiescence in any rejection, or a waiver of any arguments that might have been raised but were not raised herein or otherwise in the prosecution of this application. Applicant reserves all rights and subject matter with respect to claims being or to be pursued in this or a related application.

### **CONCLUSION**

Applicant submits that in view of the foregoing remarks and/or amendments, the application is in condition for allowance, and favorable action is respectfully requested.

The Commissioner is hereby authorized to charge any fees, including extension fees, or to charge any additional fees or underpayments, or to credit any overpayments, to the Credit Card account referenced and authorized via the EFS Web (Electronic Filing System). As an alternative, in case the Credit Card cannot be processed, the Commissioner is hereby authorized to charge any fees, additional fees, or underpayments, or to credit any overpayments, to Deposit Account No. 50-1001.

Respectfully submitted,

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Hilde Coeckx  
Registration No. 57506  
P. O. Box 2200  
Hillsboro, Oregon 97123  
Telephone: (503) 844-9009  
Facsimile: (503) 296-2172  
email: mail@ganzlaw.com